

APPENDIX 6

TOLERANCE / MQO / VALUE / UNITS / FACTOR TABLE

Core optional variables are in italics. n/a is not applicable. Regional items are shaded. All item numbers follow regional format. All Factor values are regional.

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
Plot Level Data						
1010	STATE	No errors	at least 99% of the time	Appendix 1	n/a	5
1020	COUNTY	No errors	at least 99% of the time	Appendix 1	n/a	5
1030	PLOT NUMBER	No errors	at least 99% of the time	0001 to 9999	n/a	5
1200	P3 HEXAGON NUMBER	No errors	at least 99% of the time		n/a	5
1210	P3 PLOT NUMBER	No errors	at least 99% of the time	1 to 9	n/a	1
1040	SAMPLE KIND	No errors	at least 99% of the time	1 to 3, 9	n/a	5
1050	MANUAL VERSION	No errors	at least 99% of the time	1.5	n/a	1
1060	CURRENT DATE	No errors	at least 99% of the time		yyyy/mm/dd	1
R101	PAST DATE	No errors	At least 99% of the time		yyyy/mm/dd	1
1160	QA STATUS	No errors	at least 99% of the time	1 to 7	n/a	1
1170	CREW TYPE	No errors	at least 99% of the time	1, 2	n/a	1
R102	CRUISER #	No errors	At least 99% of the time	001 to 999	n/a	1
R103	# OF ACCESSIBLE FORESTLAND CONDITIONS	No errors	At least 99% of the time	1 to 9	n/a	1
R104	# OF TREE ENTRIES	No errors	At least 99% of the time	000 to 999	n/a	1
R109	PRISM POINT REMEASURED/ SUBPLOT CENTERS REVERTED	No errors	At least 99% of the time	0 to 5	n/a	1
1080	TRAILS OR ROADS	No errors	at least 90% of the time	0 to 5	n/a	1
1100	ROAD ACCESS	No errors	at least 90% of the time	0 to 4, 9	n/a	1
1110	PUBLIC USE RESTRICTIONS	No errors	at least 90% of the time	0 to 3, 9	n/a	1
1120	RECREATION USE 1	No errors	at least 90% of the time	0 to 7, 9	n/a	1
1130	RECREATION USE 2	No errors	at least 90% of the time	0 to 7, 9	n/a	1
1140	RECREATION USE 3	No errors	at least 90% of the time	0 to 7, 9	n/a	1
R105	HUMAN DEBRIS	No errors	At least 80% of the time	0 to 3	n/a	1
1150	WATER ON PLOT	No errors	at least 90% of the time	0 to 5, 9	n/a	1
1090	HORIZONTAL DISTANCE TO IMPROVED ROAD	No errors	at least 90% of the time	1 to 9	n/a	1
R106	HORIZONTAL DISTANCE TO URBAN	No errors	At least 90% of the time	1 to 9	n/a	1
R107	HORIZONTAL DISTANCE TO AGRICULTURE	No errors	At least 90% of the time	1 to 9	n/a	1
R108	SIZE OF CONTIGUOUS FOREST	No errors	At least 90% of the time	0 to 7	n/a	1
1803	GPS UNIT	No errors	at least 99% of the time	0 to 4	n/a	1
1804	GPS SERIAL NUMBER	No errors	at least 99% of the time	000001 to 999999	n/a	1
1806	LATITUDE	+/- 140'	at least 99% of the time	See App.1	D/M/S	3
1807	LONGITUDE	+/- 140'	at least 99% of the time	See App.1	D/M/S	3

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
1814	GPS ELEVATION	No errors	at least 99% of the time	-00100 to 20000	FEET	1
1815	GPS ERROR	No errors	at least 99% of the time	0 to 70 if possible 71 to 999 if an error < 70 cannot be obtained	feet	1
1816	NUMBER OF AVG.READINGS	No errors	at least 99% of the time	1 to 999	n/a	1
1812	AZIMUTH TO PLOT CENTER	+/- 3 degrees	at least 99% of the time	000 at plot center 001 to 360 not at plot center	degrees	1
1813	DISTANCE TO PLOT CENTER	+/- 6 ft	at least 99% of the time	000 at plot center 001 to 200 if a Laser range finder not used 001 to 999 if a Laser range finder is used	feet	1
1190	PLOT-LEVEL NOTES	When applicable	When applicable	English, alpha-numeric	n/a	1 to 5
Condition Level Data						
2201	CONDITION CLASS NUMBER	No errors	at least 99% of the time	1 to 9	n/a	1
R201	SIMILAR IDENTIFIED CONDITION	No errors	At least 99% of the time	0 to 9	n/a	5
2425	PRESENT LAND USE	No errors	At least 99% of the time	01-03;10-16; 20; 30-33; 40-43; 90-94	n/a	5
2202	PRESENT CONDITION STATUS	No errors	at least 99% of the time	1 to 7, 9	n/a	5
R203	NEW PAST LAND USE	No errors	At least 99% of the time	01-03;10-16; 20; 30-33; 40-43; 90-94	n/a	5
R202	NEW PAST CONDITION STATUS	No errors	At least 99% of the time	1 to 7, 9	n/a	5
R219	OLD LAND USE	No errors	At least 99% of the time	01-03;10-16; 20; 30-33; 40-43; 90-94	n/a	5
2426	NONFOREST YEAR	+/- 1 year for 5-year measure. cycles +/- 2 years for > 5-year measure. cycles	at least 70% of the time	1996 or higher	year	1
2401	RESERVED STATUS	No errors	at least 99% of the time	0, 1	n/a	3
2407	OWNER CLASS	No errors	at least 99% of the time	11-13; 21-25; 31-33; 41-45	class	2
2402	OWNER GROUP	No errors	at least 99% of the time	10, 20, 30, 40	n/a	3
2408	PRIVATE OWNER INDUSTRIAL STATUS	No errors	at least 99% of the time	0, 1	n/a	1
R205	TRACT SIZE (TOTAL ACRES)	No errors	At least 99% of the time	00001 to 99999	n/a	1
R206	PERCENT FOREST	No errors	At least 99% of the time	001 to 100	n/a	1

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
2403	PRESENT FOREST TYPE	No errors	at least 99% of the time in group at least 95% of the time in type	Appendix 2	n/a	5
R207	NEW PAST FOREST TYPE	No errors	at least 99% of the time in group at least 95% of the time in type	Appendix 2	n/a	3
2404	STAND SIZE CLASS	No errors	at least 99% of the time	0 to 6	class	5
2405	PRESENT REGENERATION STATUS	No errors	at least 99% of the time	0, 1	n/a	5
R209	PAST REGENERATION STATUS	No errors	at least 99% of the time	0, 1	n/a	3
2409	ARTIFICIAL REGENERATION SPECIES	No errors	at least 99% of the time	Appendix 4	n/a	1
2406	TREE DENSITY	No errors	at least 99% of the time	1 to 3	n/a	1
2410	STAND AGE	+/- 10%	at least 95% of the time	000 to 997, 998, 999	year	5
R211	STAND STRUCTURE	No errors	at least 99% of the time	1 to 4	n/a	1
2411 413 2415	DIST 1, 2, 3	No errors	at least 99% of the time	00; 10; 20; 30-32;40-46; 50-54; 60; 70; 80	n/a	5/each
2412 2414 2416	DIST YEAR 1, 2, 3	+/- 1 year for 5-year measure. cycles +/- 2years for > 5-year measure. cycles	at least 99% of the time	Since the previous plot visit, or the past 5 years for plots visited for the first time; 9999 if disturbance occurs continuously over time	year	1/each
2417 2419 2421	TREATMENT 1, 2, 3	No errors	at least 99% of the time	00, 10, 20, 30, 40, 50	n/a	5/each
2418 2420 2422	TREATMENT YEAR 1, 2, 3	+/- 1 year for 5-year measure. cycles +/- 2 years for >5-year measure. cycles	at least 99% of the time	Since the previous plot visit, or the past 5 years for plots visited for the first time	year	1/each
2423	PHYSIO-GRAPHIC CLASS	No errors	at least 80% of the time	xeric: 11, 12, 13, 19 mesic: 21, 22, 23, 24, 25, 29 hydric: 31, 32, 33, 34, 35, 39	n/a	3
R212	OPERABILITY	No errors	at least 99% of the time	0 to 5	n/a	1
R213	WATER SOURCE	No errors	at least 90% of the time	0 to 9	n/a	1
R214	DISTANCE TO WATER SOURCE	<100' +/-10', >100' +/-100'	at least 90% of the time	0 – 100, 150,250,etc., 999	n/a	1
R215	SITE CLASS	+/- 1 class	at least 99% of the time	1 to 7	n/a	5
R216	FIRE	No errors	at least 99% of the time	0,1	n/a	1
R217	GRAZING	No errors	at least 99% of the time	0,1	n/a	1

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
R218	CONDITION LEVEL NOTES	When applicable	When applicable	English, alpha-numeric	n/a	1 to 5
Boundary References						
3201	SUBPLOT NUMBER	No errors	at least 99% of the time	1 to 4	n/a	1
3202	PLOT TYPE	No errors	at least 99% of the time	1 to 3	n/a	1
3203	BOUNDARY CHANGE	No errors	at least 99% of the time	0 to 3	n/a	1
3204	CONTRASTING CONDITION	No errors	at least 99% of the time	1 to 9	n/a	1
3205	LEFT AZIMUTH	+/- 5 degrees	at least 90% of the time	001 to 360	degrees	3
3206	CORNER AZIMUTH	+/- 5 degrees	at least 90% of the time	000 to 360	degrees	3
3207	CORNER DISTANCE	+/- 1 ft, Microplt +/- 3 ft, Subplt	at least 90% of the time	microplot: 1 to 7 subplot: 1 to 24	feet	3
3208	RIGHT AZIMUTH	+/- 5 degrees	at least 90% of the time	001 to 360	degrees	3
Subplot Data						
4010	SUBPLOT NUMBER	No errors	at least 99% of the time	1 to 4	n/a	1
4020	SUBPLOT CENTER CONDITION	No errors	at least 99% of the time	1 to 9	n/a	5
4030	MICROPLOT CENTER CONDITION	No errors	at least 99% of the time	1 to 9	n/a	5
4080	SUBPLOT CONDITION LIST	No errors	at least 99% of the time	1000 to 9876	n/a	1
4040	SUBPLOT SLOPE	+/- 10 %	at least 90% of the time	000 to 155	percent	1
4050	SUBPLOT ASPECT	+/- 10 degrees	at least 90% of the time	000 to 360	degrees	1
4060	SNOW/WATER DEPTH	+/- 0.5 ft	At the time of measurement	0.0 to 9.9	feet	1
R401 R403 R405 R407	INVASIVE/EXOTIC PLANT 1	No errors	at least 90% of the time	See Field Guide for Invasive/Exotic Pest plants	n/a	1
R402 R404 R406 R408	PLANT PERCENT COVERAGE	No errors	at least 90% of the time	1 to 4, 9	n/a	1
Tree and Sapling Data						
R501	ENTRY NUMBER	No errors	At least 99% of the time	001 to 200	n/a	1
5010	SUBPLOT NUMBER	No errors	at least 99% of the time	1 to 4	n/a	1
5020	TREE RECORD NUMBER	No errors	at least 99% of the time	000, 001 to 999	n/a	1
R508	PRISM POINT# TREE #	No errors	at least 99% of the time	000, 001 to 999	n/a	1
5030	CONDITION CLASS NUMBER	No errors	at least 99% of the time	1 to 9	n/a	1
5040	AZIMUTH	+/- 3 degrees	at least 90% of the time	001 to 360	degrees	1
5050	HORIZONTAL DISTANCE	microplot: +/- 0.2ft subplot: +/- 1.0 ft	at least 90% of the time	microplot: 00.1 to 6.8 subplot: 00.1 to 24.0 annular plot: 00.1 to 58.9	feet	1

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
5060	PRESENT TREE STATUS	No errors	at least 95% of the time	0 to 4	n/a	5
R507	CO-LOCATED MICROPLOT TREE STATUS	No errors	at least 95% of the time	0 to 4	n/a	5
R509	PRISM TREE STATUS	No errors	at least 95% of the time	0 to 4	n/a	5
R510	PAST TREE STATUS	No errors	at least 95% of the time	0to 4	n/a	5
5061	NEW TREE RECONCILE	No errors	at least 95% of the time	1 to 4	n/a	5
5070	LEAN ANGLE	No errors	at least 99% of the time	0, 1	n/a	1
5080	SPECIES	No errors	at least 99% of the time for genus at least 95% of the time for species	Appendix 3	n/a	2
5092	PRESENT DIAMETER	+/- 0.1 inch per 20 inches of diameter on trees with a measured diameter	at least 95% of the time	001 to 999	inches	Saps & Snags = 1, Pole & Saw = 5
5091	PAST DIAMETER	No errors	at least 99% of the time	001 to 999	inches	1
5100	DIAMETER CHECK	No errors	at least 99% of the time	0 to 2	n/a	1
5230	LENGTH TO DIAMETER MEASURE-MENT POINT	+/- 0.2 ft	at least 90% of the time	0.1 to 15.0	inches	1
R503	TREE CLASS	No errors	at least 90% of the time	2, 3, 4	n/a	5
5150	CROWN CLASS	No errors	at least 85% of the time	1 to 5	n/a	2
5170	COMPACTED CROWN RATIO	+/- 10%	at least 80% of the time	00 to 99	percent	1
R504	TREE GRADE	No errors	at least 90% of the time	1 to 5	n/a	2
R502	BOARD FOOT CULL	+/- 10%	at least 90% of the time	0 to 99	percent	2
5110	ROTTEN / MISSING CULL	+/- 10%	at least 90% of the time	0 to 99	percent	2
5120	TOTAL LENGTH	+/- 10% of true length	at least 90% of the time	005 to 400	feet	Saps & Snags = 1, Pole & Saw = 5
5130	ACTUAL LENGTH	+/- 10% of true length	at least 90% of the time	005 to 400	feet	Saps & Snags = 1, Pole & Saw = 5
5140	LENGTH METHOD	No errors	at least 99% of the time	1 to 3	n/a	1
R505	FUSIFORM RUST AND DIEBACK	No errors	at least 80% of the time	0 to 2	n/a	1
R506	DIEBACK SEVERITY	+/- 1 class	at least 80% of the time	1 to 9	class	1
5181 5184	DAMAGE LOCATION 1, 2	+/- 1 location class	at least 80% of the time	0 to 9	class	1
5182 5185	DAMAGE TYPE 1, 2	No errors	at least 80% of the time	01-05; 11-13; 20-25; 31	n/a	1
5183 5186	DAMAGE SEVERITY 1, 2	No errors	at least 80% of the time	Defined for each DAMAGE TYPE	class	1
5190	CAUSE OF DEATH	No errors	at least 80% of the time	10 to 90	n/a	1

Item#	Variable Name	Tolerance	MQO	Values	Units	Factor
5200	MORTALITY YEAR	+/- 1year for 5-year measure. cycles +/- 2years for > 5-year measure. cycles	at least 70% of the time	1996 or higher	year	1
5210	DECAY CLASS	+/- 1 class	at least 90% of the time	1 to 5	class	1
5220	UTILIZATION CLASS	No errors	at least 99% of the time	00, 11-12	n/a	1
5260	TREE NOTES	n/a	n/a	English, alpha-numeric	n/a	n/a
Seedling Data						
6010	MICROPLOT NUMBER	No errors	at least 99% of the time	1 to 4	n/a	1
6030	CONDITION CLASS	No errors	at least 99% of the time	1 to 9	n/a	1
6020	SPECIES	No errors	at least 99% of the time for genus at least 95% of the time for species	Appendix 3	n/a	1
6040	SEEDLING COUNT	No errors	at least 95% of the time	1 to 5 exact count 6 more than 5 individuals by species by condition class	number	1
Site Tree Information						
7021	CONDITION CLASS LIST	No errors	at least 99% of the time	1 to 9 or 10000 to 98765	n/a	1
7022	SPECIES	No errors	at least 99% of the time for genus at least 95% of the time for species	Appendix 4	n/a	1
7023	DIAMETER	+/- 0.1 inch per 20 inches of diameter on trees with a measured diameter	at least 95% of the time	001 to 999	inches	1
7024	SITE TREE LENGTH	+/- 10% of true length	at least 90% of the time	001 to 999	feet	1
7025	TREE AGE AT DIAMETER	+/- 5 years	at least 95% of the time	001 to 999	year	1
7026	SITE TREE NOTES	When applicable	When applicable	English, alpha-numeric	n/a	1 to 5
7027	SUBPLOT NUMBER	No errors	at least 99% of the time	1 to 4	n/a	1
7028	AZIMUTH	+/- 10 degrees	at least 90% of the time	001 to 360	degrees	1
7029	HORIZONTAL DISTANCE	+/-5 ft	at least 90% of the time	000.1 to 200.0	feet	1

MISSED/ADDED CONDITIONS
If the cruiser misses or adds a condition, either forested or non-forested, include a 26-point deduction in the total error column for missed/added conditions on the QA scoresheet. If, on a plot with at least one forest condition, the cruiser does not delineate multiple non-forest conditions on a plot when more than one non-forest conditions exists (i.e., pasture and census water) then include a 5-point deduction for each non-forest condition missed on the plot in the total error column for missed/added conditions on the QA scoresheet.